



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
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Serial No. 10/738,355-335)	
Filed: December 12, 2003)	Date: August 30, 2006
Notice: June 14, 2006)	Group Art Unit 3682
For:)	
System and method of getting for a bicycle)	Examiner: Charles, Murcus
And other pedal-driven vehicles,)	
Mechanical energy output exceeded muscular energy)	
Input due to gravitational lever)	

Substitution of the Specification

"The additional planetary transmission for a bicycle and method of getting high riding speed, due to the interaction between transmissions" in accordance with a Supplemental Amendment:

Background

The present invention is based on the experimental data of conversion of gravity into mechanical rotational energy, which are approved by USA Patents 5,667,038; 5,921,133A; 6,363,804B1; 6,601,478B2 on the base of videotapes.

The result of these experiments is a discovery of a specific gravity, which decreases in a negative zone of free rotation and increases in positive (active) zone of rotation. The present invention is a logical completion of what is done.

In the present invention, the function of a gravitational lever is carried out by a special pedal having thereon an unbalanced mass as a source of gravitational energy and planetary mechanism, which increases bicycle's riding speed spending the same muscular energy.

The transmission of a new speedy bicycle was tested in a laboratory since 1999, after the patent No. 5,921,133 was published. The result of reaching riding speed around 35 MPH by a non-professional bicyclist and even not a young person shows that a first step toward large-scale production of such bicycles is done.

Summary of the Invention

Accordingly, it is an object of the present invention to provide a new additional planetary transmission and Method of getting high riding speed, due to the interaction between transmissions

In keeping with these objectives and with others, which will become apparent hereinafter, one feature of the present invention resides, briefly stated in the additional planetary transmission for a bicycle and Method of getting high riding speed, due to the interaction between transmissions, which have a first rotatable unbalanced element, as a receiver of power from two different sources of energy, such as a foot's muscular energy and gravitational energy of its unbalanced part and converts that energy into rotational mechanical energy for transmission of the driving power, via a second one-way directional element and a third opposing rotatable element to a driving sprocket of a bicycle.

It is fixed to a third element and freely rotates with it on a crank's axle, for transmission of the driving power, via the chain to a freewheel and then to a drive wheel of a bicycle where it is in the course of normal forward motion from the pedals.

The first rotatable element being connected to a crank by leading axle rotates clockwise together with the crank around the crank's axle and of the same time rotates counter-clockwise around its own axis of rotation together with a leading axle, which is connecting both rotating elements to each other, while the second rotatable element, being connected to the first rotatable element by means of an overrunning clutch and to the third rotatable element by means of toothing, rotates clockwise around the third element's and crank's axes and at the same ^{time} the second element rotates counter-clockwise around its own axle of rotation and due to that, makes the third element as well as a driving sprocket of a bicycle, rotate faster than usual then when the driving sprocket rotates together with a crank's axle under the same equal condition.

The method of the invention includes the steps of interaction between two transmissions, which is powered by two different sources of energy, such as foot muscular energy and gravitational energy and due to that, provides high riding speed.

The invention itself, both to its construction and to its manner of operation, will be best understood from the following description of a preferred embodiment, which is accompanied by the following drawings.

Brief Description of the Drawings

Fig. 1 is a vertical sectional view of the schematic representation of an additional planetary transmission for a bicycle.

Fig 2A is a view according to the arrow "A" of the system, shown in Fig 1.

Fig. 2B is a view according to the arrow "B" of the system shown in Fig. 1

Description of a Preferred Embodiment

The additional planetary transmission for a bicycle and method of getting high riding speed, due to the interaction between transmissions, has two rotatable parts, one of which is placed on a crank's axle for a free rotation around it, while the other part is placed on crank's axle for rotation with it.

The first part includes the driving sprocket of a bicycle which is fixed to a disk 5, having a chainomatic periphery 5a.

The second part includes crank 8.

The kinematic relations between the satellite sprocket 4s and chainomatic periphery 5a of disk 5 is as follows: during one revolution disk 5 with a driving sprocket on it outstrips the crank 8 with a pedal 1 for one radius of the disk 5, because the length of a circle of the satellite sprocket 4c is equal to the radius of disk 5 with a chainomatic periphery (according to a working model).

Unbalanced part 1a of a pedal 1 starts making an additional turn of a disk 5 (and same of the driving sprocket) and this proves an increase of the speed.

The application is not limited to the details shown, since various modifications and changes are possible, without changing the patent in any way from the spirit of the invention. What is desired to be protected by a patent letter is set forth in the appended claims.